

Remarks

Claims 1-38 and 42 are pending. Claims 39-41 and 43 are canceled in this Response.

Rejections Under 35 U.S.C. § 112

All claims were rejected under Section 112 as being indefinite. The Office asserts there is insufficient antecedent basis for "the report level" recited in each of the independent claims. (Claim 20 recites a report "value" rather than a report "level." Applicants have construed the Office's remarks as applying the toner value recited in Claim 20 and Claims 21-35 incorporating the limitations of Claim 20.)

Claims 1, 13, 36 and 42 have been amended to delete reference to "an initial report level." These claims now recite "a toner level" the first time toner level is introduced in the claim and subsequent references to "the toner level", therefore, are supported by proper antecedent basis.

The claims have also been amended to expressly recite the progression of steps. Claim 1, for example, now recites setting a toner level upon powering up, then averaging a group of sensor readings, and then averaging a group of subsequent sensor readings.

The claims have also been amended to expressly recite that the report level remains unchanged if the sensors readings are not less than the report level. Claim 1, for example, now recites if the group average is not less than the report level, leaving the report level unchanged.

Applicants note that the toner level may change. For example, in Claim 1 the toner level is set initially upon powering up a print device or replacing a toner cartridge. Subsequently, the toner level may be reset to the group average and/or to the subsequent group average. While the group average will always be compared to the initial toner level, the subsequent group average will not. (The comparison is implicit in the "if" statement.) Rather, the subsequent group average will either be compared to the group average or to the initial toner level, depending on the outcome of the comparison between the group average and the initial toner level. Applicants respectfully submit that "the toner level" clearly refers to the toner level at the time the comparison is made – the initial toner level for the group average comparison and the group average or the initial toner level for the subsequent group average comparison.

In the interest of both clarity and brevity, Applicants have elected to not recite a cascading litany of first, second and third report levels or report level values. Following is an example of what Claim 1 might look like if a litany of report level values were included.

setting a toner report level to a first value upon powering up a print device or replacing a toner cartridge;

averaging a group of toner level sensor readings to produce a group average;

if the group average is less than the first value, setting the report level to a second value equivalent to the group average;

if the group average is not less than the first value, leaving the report level unchanged; and then

averaging a subsequent group of toner level sensor readings to produce a subsequent group average, each reading being within a prescribed percent of the report level first value if the report level is still set at the first value or each reading being within a prescribed percent of the report level second value if the report level has been set to the second value; and

if the report level is still set at the first value and if the subsequent group average is less than the report level first value, setting the report level to a second value equivalent to the subsequent group average, or

if the report level has been set to the report level second value and if the subsequent group average is less than the report level second value, setting the report level to a third value equivalent to the subsequent group average; and

if the report level is still set at the first value and if the subsequent group average is not less than the report level first value, leaving the report level unchanged, or

if the report level has been set to the report level second value and if the subsequent group average is not less than the report level second value, leaving the report level unchanged.

This example Claim 1 covers the same ground as the actual Claim 1 but is much longer and more difficult to follow and understand, particularly for those persons such as engineers, business managers, judges and jurors who do not have

the dubious privilege of reading long, convoluted and often confusing patent claims every day.

The amended claims are felt to meet the requirements Section 112.

Rejections Under 35 U.S.C. § 102

Claims 13, 15-19 and 42 were rejected under Section 102 as being anticipated by Koehler (6619206).

In the method of Claim 13, the toner report level is reset to a lower level each time the average reading of a group of toner level sensors is less than the current toner report level. In Koehler, by contrast, the average readings from a group of ink level sensors is compared to a desired ink level. If the ink level falls below the desired level, more ink is added to the ink fountain. The current group/average sensor readings in Koehler are not compared to any prior group/average sensor readings. Hence, Koehler does not teach the "if" limitations in Claim 13. Koehler compares ongoing measurements to a fixed threshold to keep the ink fountain full, while the claimed methods and devices keep resetting the reported toner level based on ongoing measurements to reflect the declining amount of toner that is available.

The Office apparently asserts that Koehler "resets" the level to a lower subsequent group/average simply because of the possibility that the subsequent group/average is less than the prior group/average. Although this assertion ignores the comparison implicit in the "if" limitations in Claim 13, Claim 13 has, nevertheless, been amended to make it clear that the report level remains unchanged if the average reading is not less than the current report level. By contrast, Koehler's ink level changes to the level recorded for each subsequent group/average.

Similar amendments have been made to Claim 42. For the same reasons noted above for Claim 13, amended Claim 42 also distinguishes patentably over Koehler.

The foregoing is believed to be a complete response to the outstanding office action.

Respectfully submitted,



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